nology to concentrate or treat waste resulting in a significant reduction of waste streams that would otherwise find their way onto the land or into ground water. For example, caustic and acidic waste streams can often be neutralized to eliminate their polluting potential. Separation of waste streams often allows recovery of products from such waste streams.

Industrial and Consumer Product Substitution

Substitution of less-polluting industrial and consumer products can significantly reduce the potential for ground water contamination. For example, the Cape Cod Planning and Economic Development Commission has sponsored educational programs for small industries and individuals on strategies for reduction of hazardous waste. There are approximately 200 consumer products used in the home that contain toxic or hazardous substances. Less-polluting substances can be substituted for many of these products. For example, latex (water-based) paint can be used instead of oil-based paints; vinegar and water can be used to remove some stains from clothing instead of solvent-based stain removers; detergent-based cleaners can be used instead of solvent-based household cleaners.

Recycling and Reuse of Chemicals, Petroleum Products, and Waste

Recycling and reuse of chemicals, petroleum products, and waste have been successful in limiting ground water contamination. With little or no modification, waste can often be reused by the original industrial facility or by other industries. For example, waste solvents from the electronics industry have been used in the manufacture of paints. Waste streams often have economic and other value if they are recovered and treated through processes such as distillation. For example, waste oil, which has often been disposed of through discharge into sewage systems and into landfills and used as a dust suppressant, can be collected, refined, and reused. Used solvents can be distilled and refined for reuse rather then disposal. Recycling and recovery of glass and metals before disposal of solid waste can reduce the quantity of waste to be disposed of and eliminate ground water contamination. Further recovery of these sources in solid waste can be accomplished by converting waste to energy through thermal decomposition. These methods of resource recovery can eliminate up to 80 percent of the solid waste normally disposed of on land. Caution should be exercised in employing trash-to-energy resource recovery, however. Air emissions of heavy metals, toxic organics, and acid gases can pose a health threat if they are not well controlled. As stated earlier in this chapter, Connecticut, Cape Cod, Massa-